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*Indian Standard*  
SPECIFICATION FOR  
AIRCRAFT-FUEL NOZZLE GROUNDING  
PLUGS AND SOCKETS

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# *Indian Standard*

## SPECIFICATION FOR AIRCRAFT-FUEL NOZZLE GROUNDING PLUGS AND SOCKETS

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# *Indian Standard*

## SPECIFICATION FOR AIRCRAFT-FUEL NOZZLE GROUNDING PLUGS AND SOCKETS

### 0. FOREWORD

**0.1** This Indian Standard was adopted by the Indian Standards Institution on 15 November 1975, after the draft finalized by the Aircraft Electrical Equipment Sectional Committee had been approved by the Electro-technical Division Council.

**0.2** During the recent years there has been increasing demand of electrical equipment for use in aircrafts. To provide the necessary guidance regarding technical knowhow and other requirements such as minimum performance requirements consistent with optimum quality and uniform test methods, urgent need has been felt for standardization in this field.

**0.3** This standard is based, on ISO/R 46-1970 'Aircraft-fuel nozzle grounding plugs and sockets', issued by the International Organization for Standardization. Assistance has also been derived from BS : G. 175 'Aircraft fuel nozzle grounding plugs and sockets', issued by the British Standards Institution.

**0.4** For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS : 2-1960\*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

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### 1. SCOPE

**1.1** This standard specifies the requirements for grounding plugs to be attached by cable to the nozzles of aircraft refuelling tankers. It also covers sockets to be provided in the aircraft for the accommodation of the plugs and the minimum length, minimum diameter, maximum resistance and material of the grounding cable.

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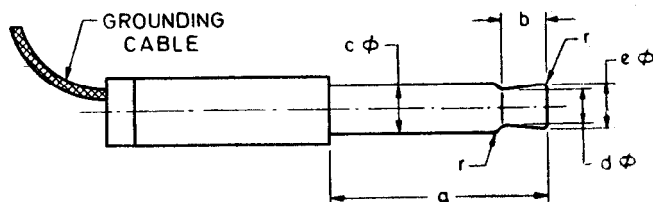
\*Rules for rounding off numerical values (*revised*).

## 2. REQUIREMENTS

**2.1 Plugs** — The dimensions of aircraft-fuel nozzle grounding plugs attached by cable to the nozzles of refuelling tankers and requirements for grounding cable shall be as given in Fig. 1.

**2.2 Sockets** — The grounding sockets provided on aircraft shall be suitable to accommodate plugs of dimensions shown in Fig. 1.

**2.2.1** The bore of the socket shall have a diameter of  $6.38 \begin{smallmatrix} +0.05 \\ -0 \end{smallmatrix}$  mm. The bore of the socket shall incorporate a device to ensure a good electrical contact when the plug is fully engaged in the socket such that the overall resistance of the grounding socket/cable assembly does not exceed 0.005 ohm when tested between the aircraft structure adjacent to the grounding socket and the refuelling nozzle.



Minimum length of cable : 1.4 m

Maximum diameter of cable : 1.6 mm

Material of cable : Steel — zinc or tin coated

Maximum resistance of cable : 0.005 ohms

### Dimensions

<i>a</i>	30.2 mm
<i>b</i>	6.4 mm
<i>c</i>	$6.3 \pm 0.05$ mm
<i>d</i>	$4.75 \pm 0.13$ mm
<i>e</i>	$6.15 \pm 0.076$ mm
<i>r</i>	1.6 mm

FIG. 1 AIRCRAFT FUEL NOZZLE GROUNDING PLUG



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